Electronic Stewardship for Small and Handheld Electronics

Federal Electronics Challenge

Partner Call

May 3, 2012

Agenda

- What is a small or handheld device
- Purchasing
- Data security
- Recycling/End-of-life

Small and Handheld Devices

What is a small or handheld electronic device?

- Personal Digital Assistants (PDA's)
- Cell Phones
- Digital cameras
- Global Positioning Systems (GPS)
- Portable media players
- Analytic devices
- Tablets

They can be devices for many markets:

- Consumer
- Commercial
- Industrial
- Military
- Laboratory

- Many tasks are being done by handheld devices today

Small and Handheld Devices

- For the purposes of this call they are generally:
  - Battery operated
  - Can operate independently of other devices
  - Self contained
  - May have some accessories

What's the difference?

- What makes small devices different than the larger devices they supplant?
  - Fewer serviceable parts
  - They are moving with the user
  - Shorter time between generations
  - Easier to damage
  - Harder to upgrade
  - Potentially shorter life span

What's the difference?

- What makes small devices different than the larger devices they supplant?
  - Different operating systems /software means each type of device may need different knowledge to maintain
  - Input and output devices aren't always there to support the device
    - How does data come off?
    - How are data security processes done if there isn't a drive to boot a program from?

Purchasing

- ENERGY STAR
- Notebooks and Tablet Computers
  - Uses energy efficient power supplies.
  - Operate efficiently in multiple modes of operation (Off, Sleep, and Idle).
  - Include and enable power management features of the system and provide user education about these features.
  - An ENERGY STAR label is not a guarantee that your machine is saving energy.
    - Always check to ensure that the ENERGY STAR features are enabled.

Purchasing

- ENERGY STAR
- External Power Adapters
  - As many as 1.5 billion are in use in the U.S.
    - 300 billion kWh/year, and
    - 11% of the national electric bill
  - Used in:
    - MP3 players, Personal Digital Assistants (PDAs), camcorders, digital cameras, laptops, and cordless and mobile phones.
  - Savings
    - On average, 30% more efficient than conventional models.
    - Are often lighter and smaller in size, which makes it easier for consumers to transport products like laptops.

Purchasing

- ENERGY STAR
- Battery Chargers
  - 230 million battery chargers are used in the US
  - More energy efficient battery chargers have the potential to save Americans more than 1 billion kilowatt hours (kWh) of energy per year, saving Americans more than $100 million annually
  - Conventional battery chargers — even when not actively charging a product — can draw as much as 5 to 20 times more energy than is actually stored in the battery!
  - Advanced energy-saving designs are now available that, on average, use 35% less energy.

Purchasing

- Ecolabels:
  - TCO and Blue Angle have some listed products in this class
    - These are European programs
    - Few products in the US market have these labels
  - Other certifications are being considered
- Look at key environmental attributes similar to what is available for other electronics
  - Reduced toxins
  - Recyclability
  - Upgradability/Reuseability
  - End-of-life management

Purchasing

- Look at FEC tools
  - Product environmental assessment tools
  - Total cost of ownership tool
  - http://www.epa.gov/fec/resources/topenv.pdf
- Manufacturer's product environmental information sheet
- Possible future standards for mobile devices

Purchasing

- Other things to consider
  - Compatibility with existing equipment
    - Memory
    - Software
    - Cables
    - Supplies and consumables
  - Can one device support another, can cell phone tethering replace a laptop modem?
  - Can one device replace others? Camera, GPS, data logger?
  - Compatibility with networks
    - Wi-Fi
    - Cellular telephone
    - Others?

Data Security

- What kind of information are your devices carrying?
  - Webpages
  - Text messages and emails?
  - Locations? (GPS & cell phones)
  - Photos
- What about information on personal devices?
- Where is information stored on devices, and computers they sync with?
- What's the security like?

Data Security

- Understand how end-of-life data security effects these devices
  - Clearing – Resistant to keyboard attacks.
  - Purging – Resistant to laboratory attacks.
- Know the difference between resets
  - Soft – may just restart the device
  - Hard/factory – may return it to the factory settings
- Different devices may use different methods to clear memory

Data Security

- Equipment may contain information that should not get out. To find out how to reset see:
  - Owners manual
  - Websites: http://www.recellular.com/recycling/data_eraser/
- Remember data security when:
  - Transferring equipment to a new user
  - Sending equipment for repair
- Some devices may not have a way to clear data
  - Is this important based on the device and use?
- Work with you IT department to determine:
  - How to manage issues with personal equipment
  - The best way to move or remove data

End-of-Life Management

- Following the regular property process:
  - Reuse, donation, recycling before disposal
  - Refer to GSA Bulletin FMR B-34 for information: http://go.usa.gov/ySU
- Remember:
  - Cables and documentation
  - Memory cards and SIM chips
  - Will any outside services be needed?
  - Property tags
- Consumables:
  - Rechargeable batteries are recyclable
    - If the battery is not removable, can it be replaced?
  - Some accessories can also be recycled

End-of-Life Management

- Use the FEC end-of-life tools to evaluate recyclers
  - Remember: ask if a recycler is certified
- Because of the small size, many retailers and manufactures may offer recycling programs
  - EPA's Plug-in to eCycling program has links to manufacture and retailer environmental sites: http://go.usa.gov/ySV
  - The Rechargeable Battery Recycling Corporation, RBRC, offers collection programs for batteries and small devices. www.call2recycle.org
- Some devices have value at the end-of-life, can an exchange sale be done for newer equipment?

Reusability

- Network compatibility
- Connection to servers
- Compatible features
- Equipment
  - Cables and documentation
  - Memory cards
    - Remove them or include them?
    - Evaluate on a case by case basis

Discussion

- Has any one tried to buy a ‘greener’ small device?
- How have people recycled these devices?
- Has old equipment been suitable for reuse or donation?
- How has data security been handled?

Contact Information

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